108,191 296 19 108,191 British (4 SHEETS)

[This Drawing is a reproduction of the Original on a reduced scale.]

SHEET 1.

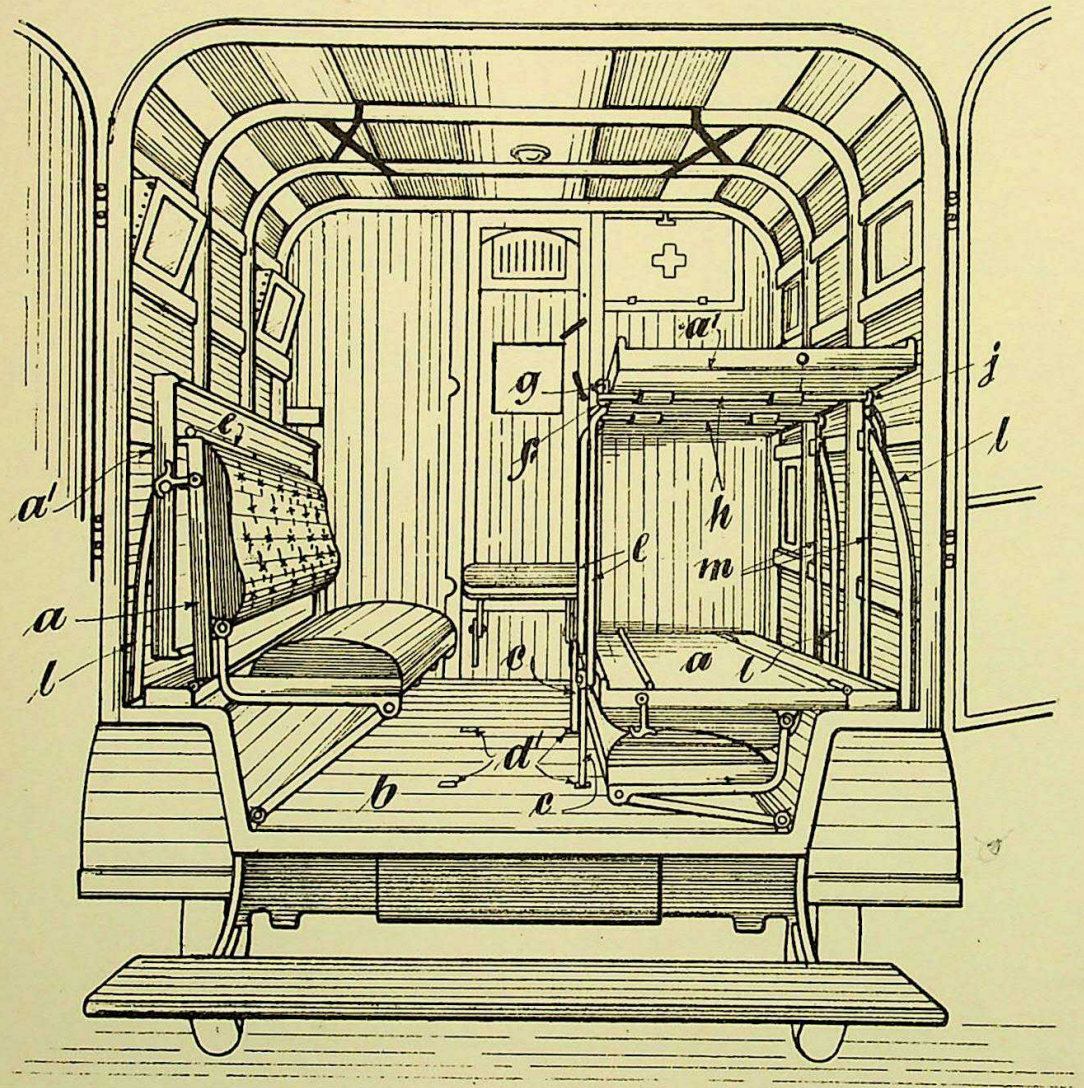

Fig. 1.

SHEET 2.

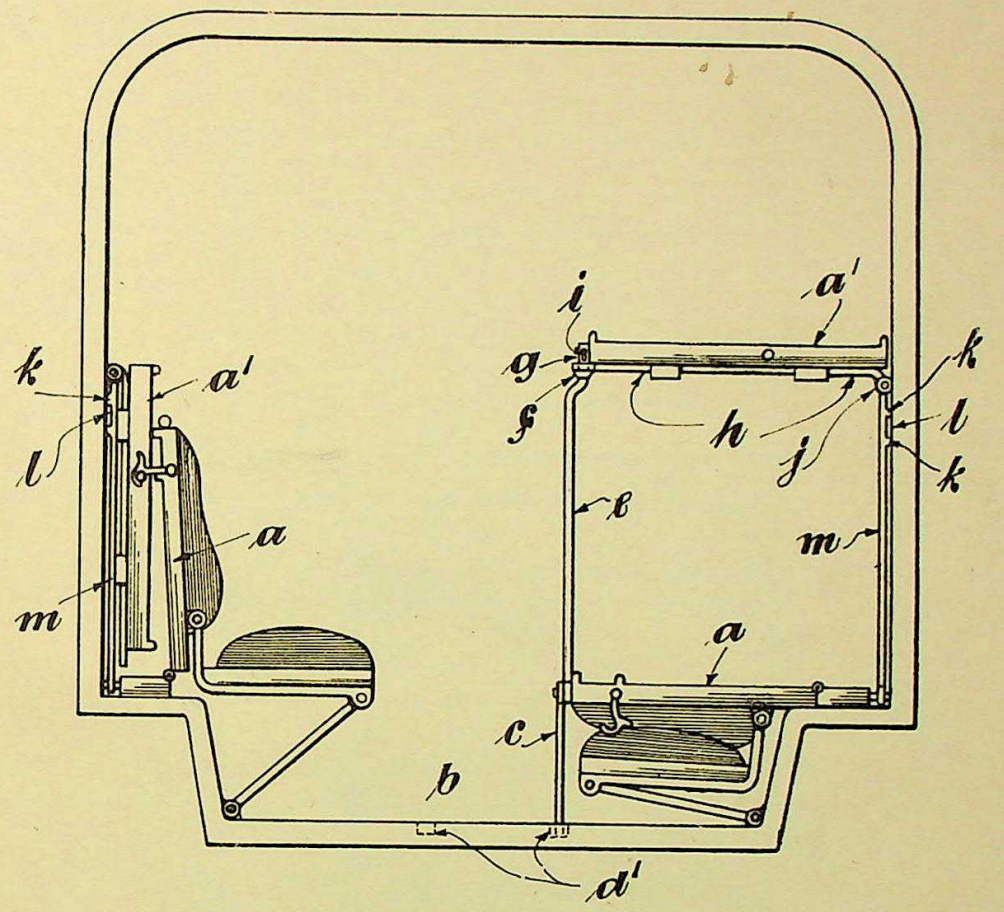

Fig. 2.

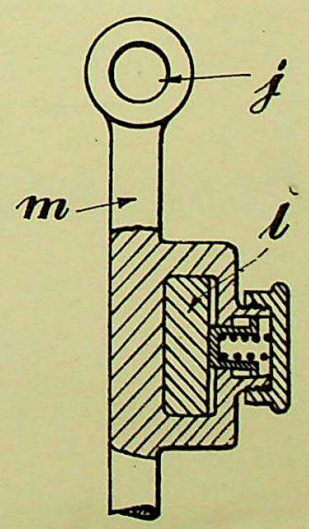

Fig. 5.

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[This Drawing is a reproduction of the Original on a reduced scale.]

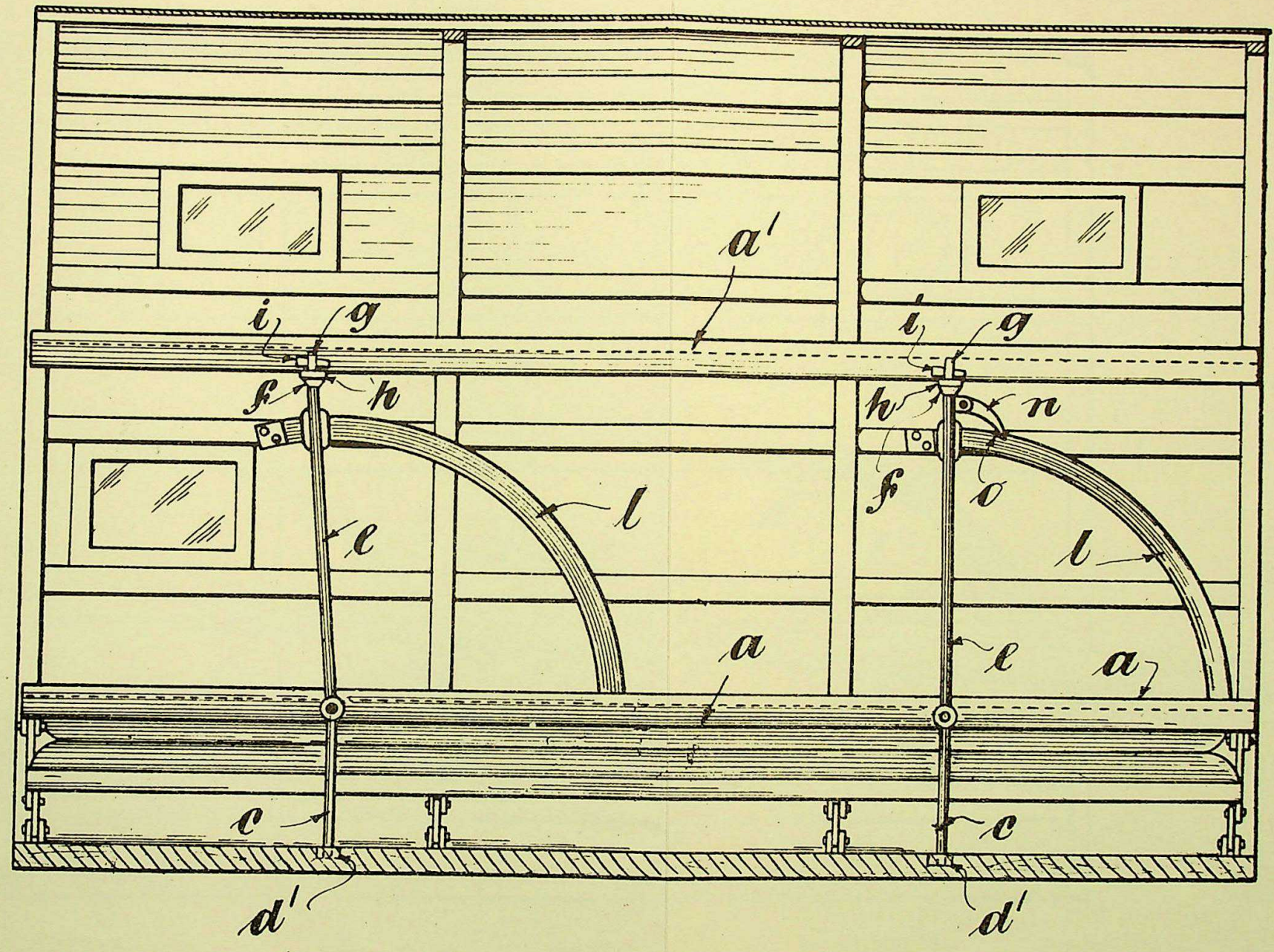

Fig. 3.

Malby & Sons, Photo-Litho

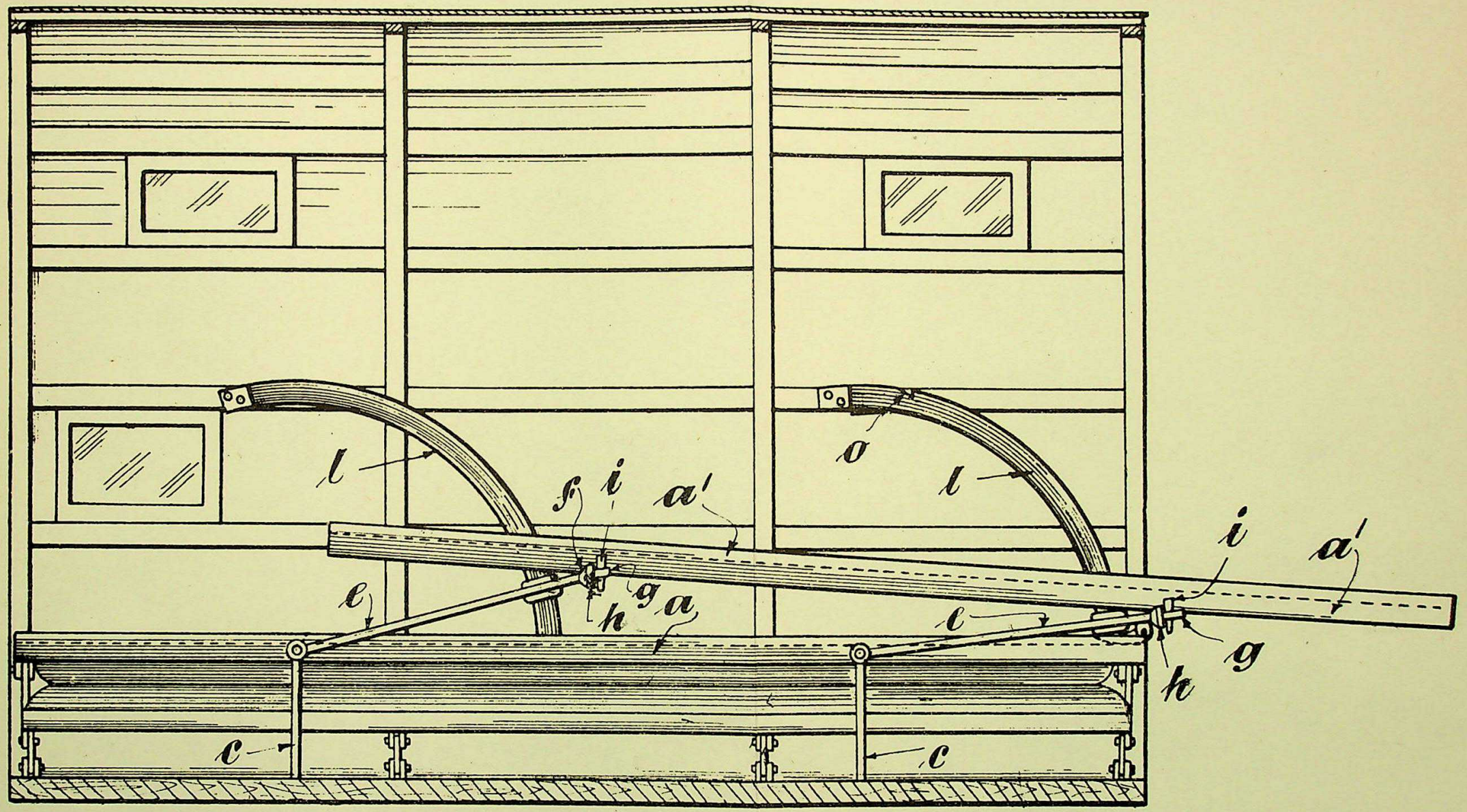

Fig. A.

[This Drawing is a full-size reproduction of the Original.]

Malby & Sons, Photo-Litho

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EXAMINER'S COPY

108,191

PATENT SPECIFICATION

Application Date, July 26, 1916. No. 10,520/16.

Complete Left, Jan. 26, 1917.

Complete Accepted, July 26, 1917.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Ambulance Vehicles.

We, ROBERT WALTER DICKSON LESLIE, Captain, Royal Army Medical Corps, 39, Panton Street, Haymarket, London, S.W., and GERALD ALFRED CHILD, Captain, Royal Army Medical Corps, T.F., Gate House, Hythe, Southampton, do hereby declare the nature of this invention to be as follows:—

This invention relates to ambulance vehicles of the kind which are adaptable to receive stretcher cases, or patients in a sitting position, and the object of the invention is to construct and arrange the parts so that the upper stretcher tray may be lowered, to receive the patient and then raised for transit, and may also be folded back against the side walls of the ambulance when adapting the same for sitting patients.

According to the invention, the upper trays are supported upon stanchions, of which one set is usually used near each end of the tray. Each set of stanchions comprises an inner and outer member, pivotally connected to a relatively fixed part of the ambulance. Each outer stanchion engages a fixed quadrant, to act as a guide during the act of lowering. The inner and outer stanchions of each set are connected by a cross bar which is hingedly connected to the outer stanchion and is detachably secured to the inner stanchion so as to form a laterally rigid, inverted U-shaped, strut, when in the operative position. The cross bars are pivotally connected to the upper tray, the arrangement being such that the latter may lower, with a parallel motion, to receive a stretcher and may then be raised and retained by a suitable catch, or the inner ends of the cross bars may be uncoupled from the inner stanchions and the tray folded flat against the wall of the ambulance and there secured.

The invention will now be particularly described as applied to the improved convertible gang-way ambulance forming the subject matter of our prior Application for Patent No. 16,073 of 1915. In ambulances of the kind referred to each bottom stretcher tray is hingedly connected to the ambulance body and overhangs the gangway. Upon the front of the tray, down-hanging supports are pivotally connected, adapted to fit into suitable sockets in the floor of the gangway when the tray is lowered. The inner stanchions for the upper tray are also pivotally connected to the inner edge of said lower tray, usually one near to each end of the same. Said stanchions are perpendicular for the greater part of their length, but near to the top they are cranked outwards, collars being formed near to the extreme ends, upon each of which rests the one (free) end of one of the cross bars. The latter is formed with a hole or eye to receive said stanchion end and is detachably secured thereto by a pin or nut engaging a hole or screw threads on the stanchions.

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The outer stanchions are pivotally connected to a relatively fixed part of the ambulance, the pivots being in axial alignment with the pivots of the inner stanchions. Said outer and inner stanchions are the same length and to the ends of the former the cross stays are hingedly connected so as to be capable of turning in the plane common to each set. Projections are formed on the outer stanchions to engage quadrants fixed to the ambulance walls and said stanchions are so mounted as to act as guides during the lowering operation. If desired springs may be interposed for braking purposes.

A pawl is provided on each of the rear outer stanchions to engage notches in the rear quadrants to retain the tray in the raised position, and, if desired, a series of notches may be provided to prevent slipping back while raising the tray, said pawl being held out of engagement when it is desired to lower the tray.

The front set of stanchions are made slightly longer than the rear ones so that when the tray is lowered it is sloped at a slight angle towards the back of the vehicle and as the cross stays are set so that the top assumes a horizontal position when raised, said inner stanchion has then passed beyond the vertical centre of the pivot, so that any weight upon the tray tends to lock said tray in the raised position.

When it is desired to fold the top tray against the side walls, the cross stays are uncoupled from the front stanchions when the tray freely hinges on the back stanchions. The front stanchions are then folded on to the lower tray, which is raised, as described in the before-mentioned patent application. The top tray is preferably adapted to fold downwards, but if desired it may be made to fold upwards.

The details of the invention may be varied, the essential point being that the upper trays may be lowered to receive stretchers and may also be folded against the ambulance wall, when it is desired to convert the ambulance for sitting patients.

Dated this 25th day of July, 1916.

For the Applicants,
JOHN G. WILSON & Co.,
Chartered Patent Agents,
55, Market Street, Manchester.

COMPLETE SPECIFICATION.

Improvements in or relating to Ambulance Vehicles.

We, Robert Walter Dickson Leslie, Captain, Royal Army Medical Corps, of 39, Panton Street, Haymarket, London, and Gerald Alfred Child, Captain, Royal Army Medical Corps, T.F., Gate House, Hythe, Southampton, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to ambulance vehicles of the kind constructed to carry two stretchers superposed and arranged so that the upper stretcher tray may be either turned up against the side of the van, when not required, or may be turned down so as to lie in a horizontal position, and lowered or raised, in that position, either with or without a stretcher and an invalid thereon.

In ambulance vehicles of the kind referred to the upper trays are supported upon stanchions, of which one set is usually used near each end of the tray. Each set of stanchions comprises an inner and outer member, pivotally con-

nected to a relatively fixed part of the ambulance. Each outer stanchion engages a fixed quadrant, to act as a guide during the act of lowering. According to the present invention the inner and outer stanchions of each set are connected by a cross bar which is hingedly connected to the outer stanchion and is detachably secured to the inner stanchion so as to form a laterally rigid, inverted U-shaped, strut when in the operative position. The cross bars are pivotally connected to the upper tray, the arrangement being such that the latter may lower, with a parallel motion to receive a stretcher and may then be raised and retained by a suitable catch, or the inner ends of the cross bars may be uncoupled from the inner stanchions and the tray folded flat against the wall of the ambulance and there secured.

The invention will now be particularly described by the aid of the accompanying drawings as applied to the improved convertible gang-way ambulance forming the subject matter of our prior Application for Patent No. 16,073 of 1915.

Fig. 1 is a perspective view of the interior of an ambulance showing the invention applied.

Fig. 2 is an end view of said ambulance.

Fig. 3 is a longitudinal sectional view of an ambulance body showing the top stretcher tray in the raised position.

Fig. 4 is a corresponding view to Fig. 3, but with the top stretcher tray lowered ready to receive a stretcher.

In ambulances of the kind referred to in the said prior patent each bottom stretcher tray a is hingedly connected to the ambulance body and overhangs the gangway b. Upon the front of the tray, down-hanging supports c are pivotally connected, adapted to fit into suitable sockets d^1 in the floor of the gangway when the tray is lowered. The inner stanchions e for the upper tray a^1 are also pivotally connected to the inner edge of said lower tray a near to each end of the same. Said stanchions e are perpendicular for the greater part of their length, but near to the top they are cranked outwards, collars f being formed near to the extreme ends g upon each of which rests the one (free) end of one of the cross bars h rotatably mounted on the under side of the upper tray a^1; said free ends are formed with holes or eyes to receive the stanchion ends g and are detachably secured thereto by pins i, or nuts, engaging holes, or screw threads, on the stanchions.

The outer stanchions m are pivotally connected to a relatively fixed part of the ambulance, the pivots being in axial alignment with the pivots of the inner stanchions e. Said outer and inner stanchions are the same length and to the ends of the former the cross stays are hingedly connected at j so as to be capable of turning in the plane common to each set. Projections k are formed on the outer stanchions to engage quadrants l fixed to the ambulance walls or said stanchions may be mounted behind the quadrants which in both cases act as guides to the stanchions during the lowering operation. If desired springs may be interposed for braking purposes, such an arrangement being shown in Fig. 5 in which the stanchion m is provided with a cup shaped recess to receive a spring adapted to press on the quadrant l.

A pawl n is provided on each of the rear outer stanchions to engage notches o in the rear quadrants to retain the tray in the raised position, and if desired, a series of notches may be provided to prevent slipping back while raising the tray, said pawl n being held out of engagement when it is desired to lower the tray.

The front set of stanchions e, m, are made slightly longer than the rear ones so that when the tray a^1 is lowered it is sloped at a slight angle towards the back of the vehicle as clearly seen in Fig. 4 and as the cross stays h are set so that the top assumes a horizontal position when raised, said inner stanchions e, m have then passed beyond the vertical centre of the pivot as shown on the left hand side of Fig. 3 so that any weight upon the tray a^1 tends to lock said tray in the raised position.

When it is desired to fold the top tray a^1 against the side walls to accommodate patients in the sitting position, the cross stays h are uncoupled from the front stanchions e by withdrawing the pins i when the tray a^1 freely hinges at j on the back stanchions m. The front stanchions e are then folded on to the lower tray a which is raised as described in the before-mentioned patent application and is shown on the left hand side of Figs. 1 and 2. The top tray is preferably adapted to fold downwards, but if desired it may be made to fold upwards.

Having now particularly described and ascertained the nature of this invention and in what manner the same is to be performed, we declare that what we claim is:—

1. In ambulance vehicles comprising a vehicle body having a lower stretcher tray or trays, an upper stretcher tray, or stretcher trays, with cross bars revolubly mounted below the said tray, or trays, the outer ends of said cross-bars being hingedly attached to swinging stanchions while the inner ends of said cross bars are detachably secured to further swinging stanchions, the arrangement being such that the cross bars, together with the swinging stanchions, constitute laterally rigid inverted U-shaped struts, when in the operative position, together with means to support the tray, or trays, in the raised position, substantially as herein set forth.

2. In ambulance vehicles as claimed in Claim 1 forming the front stanchions longer than the rear stanchions and providing projections on the outer stanchions engaging quadrants fixed to the wall of the vehicle and means to retain the tray in the raised position, substantially as herein set forth.

3. Ambulance vehicles as claimed in Claim 1 characterised in that the inner stanchions are cranked outwards near to the top, substantially as and for the purpose specified.

4. In ambulance vehicles the construction and arrangement of parts substantially as described with reference to the accompanying drawings.

Dated this 18th day of January, 1917.

For the Applicants,

JOHN G. WILSON & Co.,
Chartered Patent Agents,
55, Market Street, Manchester.

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